

**Amendments to the Claims:**

Claims 1-34 (cancelled).

35 (New): A method of altering an amount of an unsaturated fatty acid in a seed of a plant comprising decreasing a fatty acid desaturase activity in the seed by transforming the plant with a nucleic acid comprising a sequence which encodes a fatty acid hydroxylase.

36 (New): The method of claim 35, wherein said fatty acid hydroxylase has one or more catalytically essential histidine residues mutated.

37 (New): The method of claim 36, wherein said hydroxylase having one or more catalytically essential histidine residues mutated inhibits desaturase activity.

38 (New): The method of claim 35, wherein said plant is selected from the group consisting of rapeseed, *Crambe*, *Brassica jucea*, canola, flax, sunflower, safflower, cotton, cuphea, soybean, peanut, coconut, oil palm and corn.

39 (New): A method of altering an amount of an unsaturated fatty acid in a seed by decreasing a fatty desaturase activity in the seed, said method comprising

- (a) transforming a plant cell with a nucleic acid comprising a sequence which encodes a fatty acid hydroxylase enzyme;
- (b) growing a seed-bearing plant from the transformed plant cell of step (a); and
- (c) identifying a seed from the plant of step (b) with the altered amount of the unsaturated fatty acid in the seed.

40 (New): The method of claim 39, wherein said fatty acid hydroxylase has one or more catalytically essential histidine residues mutated.

41 (New): The method of claim 40, wherein said hydroxylase having one or more catalytically essential histidine residues mutated inhibits desaturase activity.

42 (New): The method of claim 39, wherein said plant is selected from the group consisting of rapeseed, *Crambe*, *Brassica jucea*, canola, flax, sunflower, safflower, cotton, cuphea, soybean, peanut, coconut, oil palm and corn.